

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Application of:  
Marschall S. Runge et al.

Serial No.: 09/832,096 <sup>069</sup>

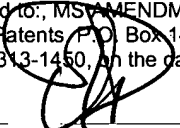
Filed: April 10, 2001

For: MITOCHONDRIAL DNA DAMAGE AS  
A PREDICTOR OF CORONARY  
ATHEROSCLEROTIC HEART DISEASE

Group Art Unit: 1634

Examiner: Jeanine Anne Goldberg

Atty. Dkt. No.: CLFR:183US

CERTIFICATE OF MAILING 37 C.F.R. 1.8	
I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: MS AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:	
July 1, 2005	
Date	David L. Parker

**INFORMATION DISCLOSURE STATEMENT**

**MS AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

In accordance with 37 C.F.R §§ 1.97(g), (h), this Information Disclosure Statement is not

to be construed as a representation that a search has been made, and is not to be construed to be

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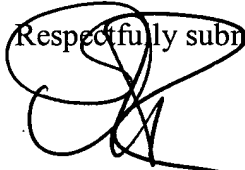
an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

This application is a continuation-in-part of US patent application serial No. 09/231,093 filed January 14, 1999 now issued as patent No. 6,322,974 and is relied upon for an earlier filing date under 35 U.S.C. § 120. only copies of those documents not previously cited and submitted to the Patent and Trademark Office in prior application Serial No. 09/231,093 are enclosed for the convenience of the Examiner.

A fee as set forth in 37 C.F.R. § 1.17(p) in the amount of \$180.00 is enclosed herewith. If an appropriate check has not been enclosed, or if it is insufficient, the Commissioner is authorized to deduct the appropriate fee from Fulbright & Jaworski Account No.: 50-1212/CLFR:183US.

Applicants respectfully request that the listed documents be made of record in the present case.

Respectfully submitted,

  
David L. Parker  
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Attorney for Applicants

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Date: July 1, 2005

Form PTO-1449 (modified)

Atty. Docket No.

CLFR:183US

Serial No.

09/832,006 069

List of Patents and Publications for Applicant's

Applicant

Marschall S. Runge *et al.*

INFORMATION DISCLOSURE STATEMENT

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## U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.

## Foreign Patent Documents

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## Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

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	C1	Adachi <i>et al.</i> , "A deletion of mitochondrial DNA in murine doxorubicin-induced cardiotoxicity," <i>Biochem Biophys Res Commun</i> , 195(2):945-951, 1993.
	C2	Andreassi, "Coronary atherosclerosis and somatic mutations: an overview of the contributive factors for oxidative DNA damage," <i>Mutation Research</i> , 543:67-86, 2003.
	C3	Attardi <i>et al.</i> , "New insights into the mechanisms of RNA synthesis and processing in human mitochondria," In: <i>Achievements and Perspectives of Mitochondrial Research</i> , eds Qkuagliarello <i>et al.</i> , Elsevier Science, NY, 145-163, 1985.
	C4	Ballinger <i>et al.</i> , "Hydrogen peroxide- and peroxynitrite-induced mitochondrial DNA damage and dysfunction in vascular endothelial and smooth muscle cells," <i>Circulation Research</i> , 86:960-966, 2000.
	C5	Ballinger <i>et al.</i> , "Mitochondrial genome damage associated with cigarette smoking," <i>Cancer Res.</i> , 56(24):5692-5697, 1996.
	C6	Ballinger <i>et al.</i> , "Maternally transmitted diabetes and deafness associated with a 10.4 kb mitochondrial DNA deletion," <i>Nature Genet</i> , 1(1):11-15, 1992.
	C7	Ballinger <i>et al.</i> , "Mitochondrial integrity and function in atherogenesis," <i>Circulation</i> , 106:554-549, 2002.
	C8	Bandy <i>et al.</i> , "Mitochondrial mutations may increase oxidative stress: implications for carcinogenesis and aging?" <i>Free Rad Biol Med</i> , 8(6):523-539, 1990.

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09/832,096-669

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	C9	Bason <i>et al.</i> , "Interaction of antibodies against cytomegalovirus with heat-shock protein 60 in pathogenesis of atherosclerosis," <i>The Lancet</i> , 362:1971-1977, 2003.
	C10	Berg <i>et al.</i> , "A new sensitive bioassay for precise quantification of interferon activity as measured via the mitochondrial dehydrogenase function in cells (MTT-method)," <i>APMIS</i> , 98:152-162, 1990.
	C11	Bindoli, "Lipid peroxidation in mitochondria," <i>Free Rad Biol Med</i> , 5(4):247-261, 1988.
	C12	Blanc <i>et al.</i> , "Protective role of uncoupling protein 2 in atherosclerosis," <i>Circulation</i> , 107:388-390, 2003.
	C13	Chen <i>et al.</i> , "Senescence-like growth arrest induced by hydrogen peroxide in human diploid fibroblast F65 cells," <i>Proc. Natl. Acad. Sci., USA</i> , 91:4130-4134, 1994.
	C14	Christianson <i>et al.</i> , "A tridecamer DNA sequence supports human mitochondrial RNA 3'-end formation in vitro," <i>Mol. Cell Biol.</i> , 8(10):4502-4509, 1988.
	C15	Christianson <i>et al.</i> , "In vitro transcription of human mitochondrial DNA: accurate termination requires a region of DNA sequence that can function bidirectionally," <i>Proc. Natl. Acad. Sci., USA</i> , 83(17):6277-6281, 1986.
	C16	Cortopassi <i>et al.</i> , "Detection of a specific mitochondrial DNA deletion in tissues of older humans," <i>Nucleic Acids Research</i> , 18(23):6927-2933, 1990.
	C17	Darley-Usmar <i>et al.</i> , "The simultaneous generation of superoxide and nitric oxide can initiate lipid peroxidation in human low density lipoprotein," <i>Free Radical Res Commun</i> , 17:9-20, 1992.
	C18	Diaz <i>et al.</i> , "Antioxidants and atherosclerotic heart disease," <i>New England Journal of Medicine</i> , 337(6):408-416, 1997.
	C19	Doerson <i>et al.</i> , "Characterization of an Rnase P activity from HeLa cell mitochondria. Comparison with the cytosol Rnase P activity," <i>J. Biol. Chem.</i> , 260(10):5942-5949, 1985.
	C20	Ferrari <i>et al.</i> , "Oxygen-mediated myocardial damage during ischaemia and reperfusion: role of the cellular defences against oxygen toxicity," <i>J Mol Cell Cardiol</i> , 17:937-945, 1985.
	C21	Finkel and Holbrook, "Oxidants, oxidative stress and the biology of ageing," <i>Nature</i> , 408:239-2447, 2000.

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	C22	Fossel <i>et al.</i> , "Cell death induced by peroxidized low-density lipoprotein: endopepsis," <i>Cancer Res.</i> , 54(5):1240-1248, 1994.
	C23	Giulivi <i>et al.</i> , "Hydroxyl radical generation during mitochondrial electron transfer and the formation of 8-hydroxydesoxyguanosine in mitochondrial DNA," <i>Arch Biochem Biophys</i> , 316(2):909-916, 1995.
	C24	Goda <i>et al.</i> , "Modulation of mitochondrion-mediated oxidative stress by nitric oxide in human placental trophoblastic cells," <i>Am J Physiol</i> , 271:H1893-1899, 1996.
	C25	Graham <i>et al.</i> , "Peroxynitrate modification of low-density lipoprotein leads to recognition by the macrophage scavenger receptor," <i>FEBS Lett</i> , 330:181-185, 1993.
	C26	Heitzer <i>et al.</i> , "Endothelial dysfunction, oxidative stress, and risk of cardiovascular events in patients with coronary artery disease," <i>Circulation</i> , 104:2673-2678, 2001.
	C27	Holland <i>et al.</i> , "Atherogenic levels of low-density lipoprotein increase hydrogen peroxide generation in cultured human endothelial cells: possible mechanism of heightened endocytosis," <i>J. Cell Phys</i> , 166(1):144-151, 1996.
	C28	Hruszkewyca, "Lipid peroxidation and mtDNA degeneration. A hypothesis," <i>Mut Res</i> , 275(3-6):243-248, 1992.
	C29	Huet <i>et al.</i> , "NADH-dependent dehydrogenase activity estimation by flow cytometric analysis of 3-(4,5-dimethylthiazolyl-2-yl)-2,5-diphenyltetrazolium bromide (MTT) reduction," <i>Cytometry</i> , 13(5):532-539, 1992.
	C30	Knight-Lozano <i>et al.</i> , "Cigarette smoke exposure and hypercholesterolemia increase mitochondrial damage in cardiovascular tissues," <i>Circulation</i> , 105:849-854, 2002.
	C31	Leibovitz <i>et al.</i> , "Neurodegeneration, myocardial injury, and perinatal death in mitochondrial superoxide dismutase-deficient mice," <i>Proc. Natl. Acad. Sci., USA</i> , 93:9782-9787, 1996.
	C32	Lippold, "Quantification succinic dehydrogenases histochemistry," <i>Histochemistry</i> , 76:381-405, 1982.
	C33	Malek <i>et al.</i> , "Hemodynamic shear stress and its role in atherosclerosis," <i>JAMA</i> , 282:2035-2042, 1999.
	C34	McCord, "Free radicals and myocardial ischemia: overview and outlook," <i>Free Rad Biol Med</i> , 4(1):9-14, 1988.

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	C35	Nomiyama <i>et al.</i> , "Accumulation of somatic mutation in mitochondrial DNA and atherosclerosis in diabetic patients," <i>Ann NY Acad Sci</i> , 1011:193-204, 2004.
	C36	Ojala <i>et al.</i> , "The tRNA genes punctuate the reading of genetic information in human mitochondrial DNA," <i>Cell</i> , 22(2 pt 2):393-403, 1980.
	C37	Ojala <i>et al.</i> , "tRNA punctuation model of RNA processing in human mitochondria," <i>Nature</i> , 29(5806):470-474, 1981.
	C38	Parthasarathy <i>et al.</i> , "Role of oxidized low density lipoprotein in atherogenesis," <i>Prog Lipid Res</i> , 31:127-143, 1992.
	C39	Sastre <i>et al.</i> , "Aging of the liver: age-associated mitochondrial damage in intact hepatocytes," <i>Hepatology</i> , 24(5):1199-1205, 1996.
	C40	Schauenstein and Hoffer-Bergthaler, "Zur cytospektrometrischen erfassung der succinodehydrogenase-aktivität mit dem MTT-reagens in isolierten zellen," <i>Monatshefte fur Chemie</i> , 103:1271-1275, 1972.
	C41	Shigenaga <i>et al.</i> , "Oxidative damage and mitochondrial decay in aging," <i>Proc. Natl. Acad. Sci., USA</i> , 91:10771-10778, 1994.
	C42	Slater <i>et al.</i> , "Studies on succinate-tetrazolium reductase systems," <i>Biochim Biophys Acta</i> , , 77:383-393, 1963.
	C43	Sorescu <i>et al.</i> , Superoxide production and expression of nox family proteins in human atherosclerosis," <i>Circulation</i> , 105:r40-r46, 2002.
	C44	Steinberg <i>et al.</i> , "Is the oxidative modification hypothesis relevant to human atherosclerosis?" <i>Circulation</i> , 105:2107-2111, 2002.
	C45	Stöllberger and Finsterer, "Atherosclerosis: infection-induced involvement of mitochondrial chaperonins," <i>The Lancet</i> , 362:1949-1950, 2003.
	C46	Topper <i>et al.</i> , "Identification of vascular endothelial genes differentially responsive to fluid mechanical stimuli: cyclooxygenase-2, manganese superoxide dismutase, and endothelial cell nitric oxide synthase are selectively up-regulated by steady laminar shear stress," <i>Proc. Natl. Acad. Sci., USA</i> , 93:10417-10422, 1996.
	C47	Trounce <i>et al.</i> , "Decline in skeletal muscle mitochondrial respiratory chain function: possible factor in ageing," <i>Lancet</i> , 333(8639):637-639, 1989.

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List of Patents and Publications for Applicant's

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	C48	Williams <i>et al.</i> , "Increased oxidative damage is correlated to altered mitochondrial function in heterozygous manganese superoxide dismutase knockout mice," <i>J. Biol. Chem.</i> , 273(43):28510-28515, 1998.
	C49	Williams, "Canaries in the coal mine: mitochondrial DNA and vascular injury from reactive oxygen species," <i>Circulation Res.</i> , 86:915-916, 2000.
	C50	Yakes <i>et al.</i> , "PCR-based assays for the detection and quantification of DNA damage and repair," In: <i>Technologies for Detection of DNA Damage and Mutations</i> , Pfeifer ed, Plenum, NY, 169-182, 1996.
	C51	Yakes <i>et al.</i> , "Mitochondrial DNA damage is more extensive and persists longer than nuclear DNA damage in human cells following oxidative stress," <i>Proc. Natl. Acad. Sci., USA</i> , 94(2):514-519, 1997.
	C52	Zhang <i>et al.</i> , "The oxidative inactivation of mitochondrial electron transport chain components and ATPase," <i>J. Biol. Chem.</i> , 265(27):16330-16336, 1990.
	C53	Cadenas and Davies, "Oxidative inactivation and proteolytic degradation of mitochondrial proteins," <i>Free Radical Biology and Medicine</i> , 29:222-230, 2000. (Abstract Only)
	C54	Halmosi <i>et al.</i> , "Effect of poly(ADP-ribose) polymerase inhibitors on the ischemia-reperfusion-induced oxidative cell damage and mitochondrial metabolism in Langendorff heart perfusion system," <i>Mol. Pharmacol.</i> , 59(6):1497-1505, 2001.

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